

O.R.S WHITE PAPER



WHY O.R.S HYDRATION TABLETS HELP AID REHYDRATION

From our expert team of pharmacists and healthcare professionals

The majority of people in the UK don't reach the fluid intake recommended by The European Food Safety Authority (EFSA).

Based on EFSA's scientifically backed guidelines, women should aim for a daily water intake of 2 litres, and men 2.5 litres.

According to EFSA, 80% of people in the UK are not adequately hydrated. O.R.S is here to meet a clear need by making scientifically proven hydration simple.

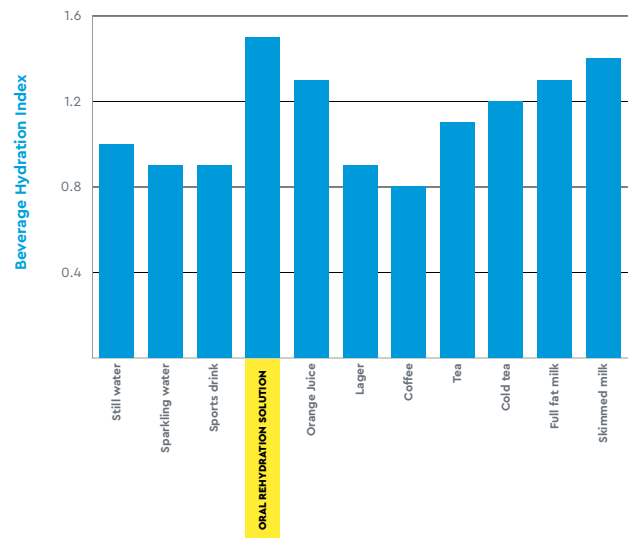
ABOUT O.R.S HYDRATION

Why O.R.S Hydration Tablets are effective:

The scientifically balanced combination of electrolytes and a small amount of glucose (17.2 kcal) has been shown to be the most effective way to rehydrate quickly and keep you hydrated for longer than water alone can.

O.R.S Hydration Tablets are formulated by pharmacists to follow **World Health Organization oral rehydration solution guidelines**.

We took over 50 rounds of taste testing to get our flavours just right.



O.R.S offers the most effective hydration method as it has the highest hydration index when compared to other drinks.

Source: American Journal of Clinical Nutrition, 2015



O.R.S Hydration Tablets contain three essential electrolytes and glucose that work together to hydrate you faster through a process called electrolyte-driven osmosis.

Sodium

Regulates the body's hydration balance especially after intense activity.

Potassium

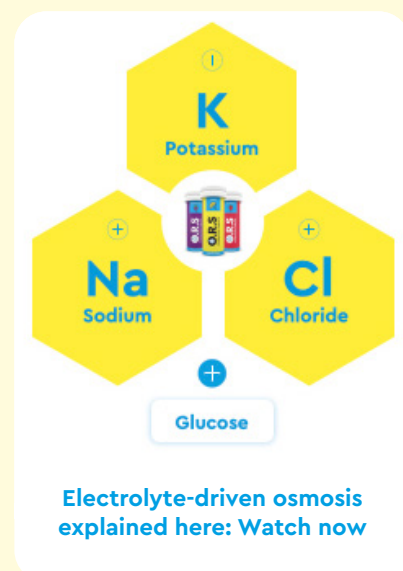
After intense activity, maintains a positive fluid balance and helps with muscle function.

Chloride

Helps regulate muscle fibre function.

Glucose

Small levels are essential for absorption of essential electrolytes.





**FORMULATED BY
PHARMACISTS**



**PRESCRIBED BY
DOCTORS**



**SUITABLE FOR
ADULTS & KIDS**

Formulated to WHO
(World Health Organization)
hydration standards

The UK's number one
healthcare recommended
hydration tablets.

Vegan friendly,
gluten free, lactose free
and contains no artificial preservatives

ABOUT ELECTROLYTES

What do electrolytes do?

Hydration and the efficient transport of drinkable liquid to where it's most needed are the two fundamental functions of electrolytes in the human body.

Hangover headaches occur because your body's electrolytes are depleted, so your body's ability to regulate hydration is impaired: without enough water in your cells, your brain tissue literally shrinks!

A similar experience may happen after a vigorous workout or a long, hot bath. Without electrolytes, the majority of water consumed would pass through the body without benefit.

We can perspire between 1.5 and 6 litres per hour while exerting maximal effort, such as when exercising for lengthy periods of time, in hot weather, or performing strenuous housework.

Sweating keeps us cool, but as we work our muscles more, we deplete our electrolytes, and giving the body more water just makes it sweat more. To hydrate the body, electrolytes must be supplemented, not reduced.

Common electrolytes used by the human body include: Sodium, Potassium, Calcium, Magnesium, Chloride, Hydrogen phosphate, Hydrogen Carbonate

The body uses electrolytes in two primary ways: intracellular and extracellular.

Electrolytes maintain homeostasis in cells, keeping them hydrated, cold, and in optimal condition for performing their essential functions.

Extracellular electrolytes are essential for nerve and muscle fibre impulse transmission. This means that a balance must be maintained between intracellular and extracellular electrolytes for proper functioning.

How do we lose electrolytes?

Your nerves and muscles (from the heart to the pectorals to the gluteus maximus) all pulse with little electrical signals that translate into judgements and actions that are beyond our conscious control, ranging from huge ones, like running a mile, to tiny ones like your heart's regular beat.

Electrolytes must be supplied throughout the entire body, since they govern all of these actions. This is useful in ensuring the availability of these critical molecules, but the drawback is the increased likelihood of electrolyte loss through urine, blood and, most significantly, perspiration.

Electrolytes and their function:

Sodium and chloride mainly hydrate, while some electrolytes have subtler but equally important effects. Electrolytes carry electricity and nerve and muscle signals. Potassium, magnesium, and sodium deficiency causes pain and death.

Potassium and magnesium control heartbeat and blood pressure, helping your heart beat normally after a workout. While workouts require a high heart rate, an uncontrolled rhythm requires hospitalisation. Magnesium helps nerves send brain signals, while calcium contracts muscles.

O.R.S AND OPTIMAL HYDRATION

Can hydration improve memory?

Dehydration seems to threaten short-term and working memory, which we need for remembering just-looked-up addresses or doing mental maths. Analysis of university students who brought water to exams showed that they scored 5 to 10% higher than those who did not.

Which sports drink is right for me?

There are three main types. Let's look at the science. Isotonic drinks are most popular because they're versatile. They match your salt and sugar concentration, so are great for marathons and team sports when you require fuel and salt replacement.

Isotonic drinks aren't absorbed as well as electrolyte-only drinks, so drinking too many during a workout can induce bloating and stomach discomfort.

What's the difference between sports drinks and O.R.S?

Isotonic Sports drinks are designed to deliver glucose – which can work as fuel replacement in intense bouts of exercise – plus salts and water. Muscles burn the glucose, conserving energy in fat and liver glycogen.

O.R.S solutions have a higher concentration of salts, replenishing stores and helping you to retain more water than a normal sports drink would. If you're trying to lose weight, the added bonus is that they contain much less sugar than sports drinks.

Hypotonic solutions, like ORS, are ideal for hydration without glucose replenishment. They are good for gymnastics, perspiration, and diarrhoea since they have less salt and sugar than the body.

Hypertonic solutions have a high concentration of salts and sugar if needed after a workout. They replenish glycogen and provide a calorie boost.

Benefits of lower osmolarity in O.R.S. formulations

The WHO recommends lower osmolarity versions of rehydration formulations to reduce the risk of hypertonic fluid absorption and hyponatraemia risk.

Products manufactured across the globe following the newer formula guidelines are aimed to be as safe and effective as standard original ORS formulations for preventing or treating dehydration from diarrhoea and reducing stool output, and have other clinical benefits.

O.R.S Hydration tablets follow the lower osmolarity formula.



REFERENCES AND FURTHER READING

Related links

- History of development of oral rehydration therapy – PubMed (nih.gov)
- <https://www.nhsinformation.scot/illnesses-and-conditions/nutritional/dehydration>
- Dehydration – Symptoms and causes – Mayo Clinic
- Dehydration – NHS (www.nhs.uk)
- Hydrated skin and the pinch test – Caidr
- <https://caidr.com/article/hydration-in-a-nutshell!36490388-dc64-488e-b903-030145b20c39>
- <https://caidr.com/article/hydration-and-mental-performance!d596ba62-7a11-4048-9cfd-0153f080a3c1>
- <https://caidr.com/condition/hydration-dehydration-and-heatstroke!4637fe46-3463-40a3-a6c9-f50120af5cc8>
- <https://www.who.int/publications-detail-redirect/WHO-FCH-CAH-06.1>
- ORAL REHYDRATION SALTS = ORS | MSF Medical Guidelines
- Blog – O.R.S Hydration (orshydration.com)

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Scan the code for more information about the science behind O.R.S Hydration Tablets.

